DOCUMENT RESUME

ED 224 068 CS 504 048

AUTHOR Ting-Toomey, Stella
TITLE Coding Conversation between Intimates: A Validation Study of the Intimate Negotiation Coding System (INCS).
PUB DATE May 82
NOTE 32p.; Paper presented at the Annual Meeting of the Eastern Communication Association (Hartford, CT, May 6-9, 1982).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Adults; Communication Research; *Interpersonal Communication; Interpersonal Competence; *Interpersonal Relationship; *Life Satisfaction; Measurement Techniques; *Spouses; Test Construction; *Test Reliability; *Test Validity
IDENTIFIERS *Conversation

ABSTRACT

A study was conducted to test the reliability and validity of the Intimate Coding System (INCS)--an instrument designed to code verbal conversation in intimate relationships. Subjects, 34 married couples, completed Spanier's Dyadic Adjustment Scale, which elicited information about relational adjustment and satisfaction in intimate couples in terms of four communication components: degree of consensus, cohesion, affectional express, and harmony in the relationship. After completing the scale, each couple then discussed two marital topics in a videotaped session. The first topic was based on expressed perceptual disagreements drawn from the Spanier scale and the second was based on J. M. Gottman's improvised marital conflict scenes. Two trained raters used the INCS to code all interactions as integrative, descriptive, or disintegrative behavior. After this coding had been completed, 10% of the interactions were recoded by the same raters. Results indicated that the intercoder and across-time reliability scores were high and satisfactory. Construct validity of the instrument was demonstrated through the statistically significant relationships between the three classes of INCS-coded behaviors with the conceptually related external variable, marital satisfaction. (FL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED224068

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

CODING CONVERSATION BETWEEN INTIMATES: A VALIDATION STUDY OF THE INTIMATE NEGOTIATION CODING SYSTEM (INCS)

Stella Ting-Toomey

Department of Communication, Rutgers University

New Brunswick, N. J. 08903

Tel.: 201-932-8250

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Stella Ting-Toomey

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Paper presented at the annual convention of the Eastern Communication Association

Top-ranked paper in the Interpersonal/Organizational Division

Hartford, Connecticut

May, 1982

CS504062

CODING CONVERSATION BETWEEN INTIMATES: A VALIDATION STUDY OF THE INTIMATE NEGOTIATION CODING SYSTEM (INCS)

INTRODUCTION

The purpose of this investigation is to test the reliability and validity of a newly-developed coding instrument--the Intimate Negotiation Coding System (INCS). The INCS is designed to code verbal conversation in intimate relationships. A reliable and valid coding scheme serves as an useful observational tool of human social conduct. It can track the communication process by which human beings influence and counterinfluence one another. A sound coding system enables the observers to describe and interpret social interaction in a systematic parsimonious manner. A well-constructed coding instrument can also facilitate the identification of process variables which are essential to the theoretical development of the human communication discipline. As Duncan (1967) aptly observes: "We do not relate and then talk, but we relate in talk" (p. 249). It is through the verbal interaction process that people create and develop their relationships with each other.

It is assumed in this investigation that different relational contexts govern different response repertoires in human interaction. The objective of the INCS instrument is for coding verbal exchanges in the context of intimate relationships. An intimate relationship is defined in this study as the stage of the relationship in which the couple acts as a distinctive social unit, displays mutual interdependency, and shares a relational history. Specifically, the new system is designed to measure the negotiation behaviors of intimate couple when they hold dissensus perspectives on the same issue. Negotiation is conceptually defined then as the verbal sequencing process between two interdependent parties who maintain conflicting viewpoints on one or more issues that confront them.

There are many relational contexts which entail negotiation interacts, however , none is more ubiquitous than the setting of marriage. As Weiss (1975) observes: "In some accounts a marriage that had at one point been satisfactory became hopeless not because of any identifiable fault in either spouse but because the couple had lost their ability to talk with one another" (p.20). The ability to communicate thus, plays a fundamental role in marital bonding. The general objective of this research project is to test how reliably and validly the new INCS instrument functions in the context of marital interaction. The two research questions in this study are: If one measures the same set of phenomenon repeatedly with the same instrument, will the results be similar? Does the newly-developed instrument capture the phenomenon adequately for the researcher's purposes?

LITERATURE REVIEW

There has been a line of interaction research that employed different classification schemes to analyze specific communicative acts of intimate couples. Although this line of investigation has clearly advanced our knowledge of how intimate couple communicates with one another, there are still some basic weaknesses that exist in these intimate communication coding schemes that need further clarifications and refinements. Some of the limitations of these intimate coding measurements are: (1) the lack of a conceptually-sound theoretical framework that interrelates the various coding categories within a coding instrumen in a meaningful direction; (2) some of the interaction categories within a scheme violate the basic coding-development rules of mutual exclusivity and mutual exhaustiveness; (3) both conceptual and operational definitions for some of these intimate coding categories are highly abstract and ambiguous, and hence require additional cognitive inferences from the trained observers; and (4) the lack of a better balance of coding categories that maintain both a task function and an

affective dimension. The following section is a presentation of studies that have used different intimate coding instruments to code intimate conversation and a critique will accompany the discussion of each coding scheme. The coding systems that will be reviewed are: (a) Rogers and Farace's (1975) Relational Control Coding System; (b) Hops, Wills, Patterson, and Weiss' (1972) Marital Interaction Coding System; (3) Gottman, Notarius, and Markman's (1976) Couples Interaction Scoring System; and (4) Rausch, Barry, Hertel, and Swain's (1974) Marital Conflict Coding Scheme. It is assumed in this literature review that communication phenomena are contextual-bound and the intent of this review is to survey only verbal conversation coding schemes that have been specifically applied in the intimate relational settings.

Relational Control Coding System (RCCS)

One of the important lines of inquiry in the speech communication discipline is relational communication analysis. The primary emphasis of relational communication analysis was the dimension of control. Relational control referred to the aspects of message exchanges by which interactors defined their positions relative to one another (Courtright, Millar & Rogers-Millar, 1979). The RCCS instrument was documented in the works of Ericson and Rogers (1973), and Rogers and Farace (1975). There were also two extensive reviews that discussed in detail the theory and research of relational communication analysis (Parks, 1977; Parks & Dindia, 1979).

Most research in relational communication has occurred in the setting of intimate relationships (Courtright et al., 1979; Ericson, 1972; Ericson & Rogers, 1973; Millar, 1973; Parks, Farace, Rogers & Albrecht, 1976). Overall, the one consistent finding of relational communication behaviors in intimate couples has been the predominant use of the one-across messages in intimate interactions. The key communication pattern that has been identified in relational control

is the use of transitory exchanges. The overriding importance of this neutralizer style of relational interaction points directly and indirectly to several limitati of the Relational Control Coding System.

The first limitation is concerned with the conceptual framework that undergi the coding scheme. By casting the entire dyadic intimate conversation in the control or power dimension, many theoretically-relevant and meaningful verbal interacts can be simply overlooked. For example, beyond the dimension of control intimate couples oftentime can engage in affective communicative acts such as coaxing or complaining to express their inner feelings as oppose to the control moves of one-up, one-down or one-across messages. The fact that most relational data has been dominated by one-across messages indicates that some underlying dimensions of relational interaction beyond the theme of control still awaits to be uncovered and explored. The second limitation is concerned with the conceptu and operational ambiguities within and among the relational control coding catego Accordingly, the RCCS has been designed to code the form or structure of relation communication (Rogers & Farace, 1975). There has not been a strong rationale offered as to justify why some relational coding categories (for example, topic change, intiation-termination) consist of structural definitions, while other categories (for example, support, nonsupport, disconfirmation) contain content definitions. By inconsistently lumping structural and content categories in one coding system, the unit of analysis is easily confounded. Based on some selected coding categories, interpretations of results can be attributed to either the grammatical form of conversation and/or the substantive content of the verbal exchanges. Finally, the third limitation of relational communicati analysis is concerned with the specific conceptualization of the one-across messages. The one-across maneuvers which are "assertions of extension...uncodabl response modes....statements of continuance, "filler" phrases, and noncommital

responses to questions" (Ericson & Rogers, 1973) serve as a catch-all category which could probably have very little implication for the dimension of control in relational interaction. In addition, the interact exchange categories of neutralized symmetry, one-up transitory, and one-down transitory that consist of at least a one-across message are also conceptually abstract to interpret. The relational definitions behind these control patterns are never clearly specified (Parks & Dindia, 1979). It seems that relational scholars have often allowed their coding categories to define their concepts rather than the reverse. The conceptual development of relational communication analysis has been trapped by the coding categories of one-up, one-down, and one-across control messages; and has thus neglected other possible continua that underlie intimate communicative behaviors.

Marital Interaction Coding System (MICS)

Developed by Hops, Wills, Patterson, and Weiss (1972), the MICS consists of 28 behavioral categories in the coding scheme. It has been used primarily for the purpose of marital problem-solving interaction in clinical settings. The majority of studies using the MICS compared distress behavior of clinic couples (under therapeutic treatment) and nonclinic couples, and attempted to measure the effectiveness of behavioral marital therapy programs. The major conceptual framework that guided the development of the MICS was the behavior exchange theory (Gergen, 1969; Kelley & Thibaut, 1978; Thibaut & Kelley, 1959). The theory stressed the importance of the exchange of mutually rewarding outcomes while minimizing costs in the development of a satisfactory relationship.

The MICS has been an important contribution to the study of marital interacti Unfortunately, because of the extensive coding categories involved in the system (some of the codes, for example, are: agree, approve, positive solution, negative solution, talk time imbalance, accept responsibility, deny responsibility),

researchers usually collapsed the 28 codes into summary categories in an arbitrary fashion with no conceptual rationale provided. For example, Weiss, Hops, and Patterson (1973) , in a marital treatment study, condensed the MICS codes into six broader categories. Instead of using these six MICS summary categories, Birchler, Weiss, and Vincent (1975) classified all MICS codes into three groups: Positive Social Reinforcement, Negative Social Reinforcement, and Problem Solving. Haynes, Follingstad, and Sullivan (1979) used only ten categories from the the MICS to assess the relationship between marital satisfaction and interaction on thirteen marital couples. In short, previous studies have found it much easier to collapse the MICS coding categories into some broader dimensions or simply arbitrarily pulled out the categories that were useful to the researchers while ignoring other existing MICS categories.

Resick, Welsh, and Zitomer (1978) also found that it was extremely difficult to obtain reliable interobserver agreement because of the extensive number of the MICS categories. Some MICS behavioral cues such as "assent" and "compliance," "agree" and "approve," "attention" and "not tracking" were found by these researchers as conceptually very similar and hence difficult to yield accurate coding. In a validation study of the MICS by the same researchers (Resick, Welsh & Zitomer et al., 1979), they found that the three MICS categories --"compliance," "noncompliance," and "normative"--never occurred even once in the marital problem-solving situation. Finally, some of the coding categories in the MICS are very solution-oriented (for example, "negative solution," "positive solution"), however, the fact is that some intimate couples while discussing their conflicting viewpoints on the same issue do not necessarily result in solution-oriented exchanges. Indeed, Jacobson and Martin (1976), in using the MICS to analyze patterns of interaction in marital couples, had suggested that the validity of the instrument may be limited only to solution-

approach intimate discussions.

Couples Interaction Scoring System (CISS)

Based partly on the MICS and partly from the Olson and Ryder's (1970) Inventory of Marital Conflict, Gottman, Notarius, and Markman (1976) developed the CISS. The content codes of the CISS are: Problem Information, Mindreading, Proposing a Solution, Communication Talk, Agreement, Disagreement, Summarizing Other, and Summarizing Self. Gottman's work has had a significant impact on the investigation of marital communication. His structural model of marital interaction (Gottman, 1979) and the use of lag sequential methodology to examine sequential patterns in interaction of both clinic couples and nonclinic couples are ingenious and innovative. Nevertheless, two limitations still exist in his CISS verbal content instrument.

First, several categories in the CISS coding instrument are highly abstract and vague, for example, categories such as "mindreading," "problem information," and "communication talk." "Mindreading" which is defined as "attributing thoughts feelings, motives, attitudes, or actions to spouse" embodies abstract empirical referents that demand high cognitive inference from the coders. The category can also be easily confounded with the two categories "problem information" and "communication talk." The same communicative act can be simultaneously interpreted as "attributing thoughts," while serving both the problem information function and the communication talk function. Judging the operational definitions of these three categories, these coding categories appear to be mutually inclusive and hence difficult to understand. The second limitation of the CISS is the inherent bias in the coding scheme to assess the conflict resolution process of distressed couples in the marital setting. Again, the interaction codes are, like the MICS, highly solution-oriented and also very task-oriented and hence neglect the affectional dimension of intimate verbal exchanges. It seems that

some of the CIIS coding categories can be modified and refined to accomodate more behavioral codes that reflect the socio-emotional characteristics of intimate conversation. In addition, each CIIS verbal category can be conceptually and operationally defined in more precise terms.

Marital Conflict Coding Scheme (MCCS)

Rausch, Barry, Hertel, and Swain (1974) in viewing marital interaction from a contextual system perspective, generated a coding scheme for coding marital conflict that consisted of three broader categories: Cognitive, Affiliative, and Coercive. These categories are further divided into six-sub-categories; from these six sub-categories, 55 behavioral codes are presented. Perhaps because of the large number of categories involved in this coding scheme, relatively few interaction researchers have used this coding instrument in their research. The major codes such as "cognitive" includes very diverse operational subcodes ranging from "giving information," "withholding information," "denying the validity of the other's arguments," to "agreeing with other statements." Consequently, the descriptive power of the coding category is lost. The conceptual definitions of the major subcodes such as "coercion" and "attack" appear to overlap with one another. There is also little information available concerning the reliability and validity of the MCCS measurement.

In summary, a survey of previous intimate interaction coding schemes points to a need for a new coding instrument that: (1) sustains a theoretical framework that interrelates the coding categories in a meaningful direction; (2) consists of coding categories that are mutually exclusive and exhaustive; (3) includes clear conceptual and operational definitions for each interaction code; (4) strikes a better balance between coding categories that emphasize both a task-oriented dimension and a socio-emotional focus in dealing with relational disagreements; and (5) captures descriptively the process of

conflict negotiation between intimate partners.

CONCEPTUAL FRAMEWORK OF THE INTIMATE NEGOTIATION CODING SYSTEM

The theoretical foundation of the Intimate Negotiation Coding System (INCS) is primarily derived from the body of literature on perceived strategies selection (Cupach, 1980; Falbo & Peplau, 1980; Fitzpatrick & Best, 1979; Fitzpatrick & Winke, 1980; Hawkins, Weisberg & Ray, 1980; McLaughlin, Cody & Robey, 1980; Miller, Boster, Roloff & Seibolds, 1977; Sillars, 1980a, 1980b) and augmented through the review of the intimate interaction literature (Cissna & Keating, 1979; Gottman, Markman & Notarius, 1977; Gottman, 1979; Royce & Weiss, 1975; Sprey, 1979; Winter, Ferreira & Bowers, 1973). Three specific observations are generated through these two sources of studies.

First, intimate communication is characterized by a highly affectional style of communication which consists of emotionally-toned verbal messages that disclose the affective state of the speaker while at the same time, appeal to or reject the emotional state of the listener. Second, intimate communication is consistently characterized by previous research as maintaining three dimension integrative dimension, descriptive dimension, and disintegrative dimension. Third, integrative dimension consists of verbal acts which reveal one's affective experience while at the same time appeal positively to the listener's feelings or ideas; descriptive dimension includes verbal acts which facilitate information flow on either the task or socio-emotional exchanges; and the disintegrative dimension consists of verbal acts which disclose one's affective state while rejecting the feelings or ideas in the intimate partner. The details of the three conceptual observations of the newly-developed INCS are presented in the following section.

The first observation based on previous intimate communication research

is concerned with the affectional style of intimate communicative acts. Categories such as "commitment activation" (Miller et al., 1977), "emotional appeals," "empathic understanding" (Fitzpatrick & Winke, 1979), "synchronized communication" (Knapp, Ellis & Williams, 1980), and "confirmation" (Montgomery, 1981) have one basic theme: these behavioral acts are highly affectional with the purpose of establishing empathy and rapport with the intimate partner in the conversation. On the other hand, emotionally-toned messages can also function negatively to reject or deny the affective experience or the ideas of the recipient For example, Fitzpatrick and Winke's "personal rejection" category, Sillars' "faulting" and "hostile questioning" categories, and Knapp et al.'s "difficult communication"category indicate that affectional messages which serve to disclose the affective state of the speaker can also be simultaneously employed to aggravate or reject the partner's feelings and thoughts. Emotions can be expressed through either confirming statements or rejecting statements. Messages that are supportive of the other partner's feelings are confirming; messages that are threatening to the other person's feelings are rejecting. Messages that are mid-way between the confirming and the rejecting dimensions are primarily descriptive. Confirmatio has been defined as "any behavior that causes another person to value himself more" (Dance & Larson, 1972; Sieburg & Larson, 1971); while rejection has been viewed as "any communicative attempt in a way that causes another person to value himself less" (Cissna & Keating, 1979). Thus, the first observation is concerned with the three conceptual dimensions of intimate conversation: confirming, descriptive, and rejecting. Descriptive exchange in intimate interaction is viewed as an intermediate point along a confirmation-rejection continuum when the intimate partners make no overt conversational moves to empathsize or antagonize his/her partner's feelings.

The second observation is an extension of the first conceptual observation

and is concerned with the broader theoretical labels that covered the various intimate communicative acts. The literature on both intimate interaction and perceived intimate strategies indicates that there are certain communicative behaviors which serve a positive function in intimate conversation and there are alsp certain behaviors which serve a negative function. The positive function acts are typically labelled in previous studies as "reward activity" (Birchler, Weiss & Vincent, 1975), "positive social reinforcement" (Cupach, 1980), "facilitative strategies" (Marwell & Schmitt, 1967), "prosocial strategies" (Roloff, 1976), and "constructive strategies " (Patterson, Hops & Weiss, 1975). The negative function acts have been categorized as "coercive activity," "negative social reinforcement," "disruptive strategies," and "antisocial strategies." Communicative acts that neither serve a positive or negative function have been generally classified as "information exchange" behavior or "conflict avoidance" behavior (Gottman, 1979; Sillars, 1980c). In brief, positive communicative acts which reveal one's inner feelings or ideas and at the same time convey understanding and empathy with the listener's feelings or ideas can be perceived as "integrative behavior" in intimate interaction. Negative communicative acts which disclose one's feelings or ideas and at the same time function as threat-inducing strategies in the partner can be viewed as "disintegrative behavior" in intimate conversation. Communicative acts which function primarily as information exchange without a high confirmation or rejection focus can be labelled as "descriptive behavior."

Finally, the third observation is concerned with the specific conceptualizations of verbal acts that constitute the "integrative," "descriptive," and "disintegrative" dimensions. Conceptually, communicative acts that are primarily mutual-oriented in information exchange with the intent of promoting a supportive climate in the dyadic conversation are included under the conceptual label

"integrative behavior." Communicative acts that are primarily descriptive-oriented are labelled as "descriptive behavior." Communicative acts that are mainly individual-oriented in information exchange and promote a threat-inducing climate in interaction are grouped under "disintegrative behavior." Mutual-oriented acts disclose one's affective state while simultaneously convey open-acknowledgement and accomodation of the other partner's feelings and needs. Individual-oriented acts express one's affective state while at the same time convey a sense of insensitivity or negative evaluation of the other partner's feelings and needs. The INCS integrative behavior includes the following four acts: Confirming, Coaxing, Compromising, Agreement. The INCS descriptive behavior includes the following: Socio-emotional Description, Task-oriented Description, Task-Oriented Question, and Socio-Emotional Question. The INCS disintegrative dimension includes the following four verbal acts: Defending, Complaining, Confronting, Disagreement. A summary of the conceptual and operational definitions of each INCS coding category is presented in table 1. Detailed descriptions and examples of each INCS verbal code and the training of the INCS coders in using the new coding instrument are available in another paper (Ting-Toomey, 1981).

In summary, three conceptual observations guided the development of the Intimate Negotiation Coding System: First, communicative acts that are incorporated in the new coding instrument should emphasize the importance of an affectional style of interaction; second, communicative acts in intimate conversation may be functionally classified into three conceptual dimensions of "integrative," "descriptive," and "disintegrative" behaviors; and third, message acts that convey a supportive climate in the interaction are mutual-oriented, descriptive acts that sustain a relatively stable climate (that is, no forward or backward supportive movement) are descriptive-oriented, and message acts that convey an uncomfortable, threat-inducing climate in the intimate interaction are mainly individual-oriented.

Table 1

Summary of the INCS Coding Categories

Integrative Behavior

1. Confirming: mutual-oriented act which reveals one's understanding of the situation and openly conveys acknowledgement, empathy and/or acceptance of partner's feelings/ideas. It can be operationally defined as:
   a. Summarizing Other: any direct statements which paraphrase the the previous statements of the partner.
   b. Parasupporting Other: statements that provide additional illustration and clarification of previous statements of the partner.
   c. Justifying Other: statements that provide reasons for the other person's ideas/actions.

2. Coaxing: mutual-oriented act which attempts to make the partner feel good about himself/herself before making explicit any other motivation behind the act.
   a. Flattering Other: statements that contain soothing words of praise or compliment of the partner.
   b. Gentle Appealing: statements that appeal to the love or affection of the partner.
   c. Humor and Jokes: statements in a humorous or joking manner to create a relaxed pleasant atmosphere in the interaction.

3. Compromising: mutual-oriented act which involves negotiation exchange of accepting part of partner's proposal while proposing one's alternative plan.
   a. Negotiating Deals: statements that indicate acceptance of the partner's plan is contingent on certain conditions.
   b. Probing Alternatives: statements that probe different alternatives in hope of finding a solution.
   c. Reconciliation: statements that signal the willingness to reexamine or resolve the disagreement through modification of original position.

4. Agreement: mutual-oriented act which indicates one's concurrence and support for the other's ideas.
   a. Assent: brief verbal responses such as "huh, huh" or "yeah, yeah."
   b. Explicit Agreement: explicit concurring statement with the other's viewpoint.
   c. Compliance: statements that comply with a preceding request.

Descriptive Behavior

5. Socio-Emotional Description: descriptive statements concerning one's feelings upon various issues, ideas, or persons in a leveling manner.

6. Socio-Emotional Question: statements that inquire about the affective state of the partner.

Table 1 (continued)

7. Task-Oriented Description: issue-oriented factual statements concerning either the past, present, or future.

8. Task-Oriented Question: statements that ask for factual information or request further elaboration of task-oriented points.

Disintegrative Behavior

9. Confronting: individual-oriented act which directly attacks, criticizes, or negatively evaluates the partner's feelings/ideas.
   a. Negative Evaluation: statements that put down the partner's emotions or ideas, or the person himself/herself.
   b. Loaded Question: statements that are disguised in question form which clearly disclose the negative intention of the speaker.
   c. Direct Rejection: statements that reveal bitterness, disgust, or sense of hopelessness of the situation, and use of sarcasms.

10. Complaining: individual-oriented act which discloses discontentment and resentment through indirect blaming strategies.
   a. Blaming Target: statements that shift the responsibility of the fault to the target.
   b. Blaming Third Party: statements that shift the responsibility of the fault from the dyad to someone else.
   c. Blaming Situation: statements that shift the responsibility of the fault from personal characteristics to situational characteristics.

11. Defending: individual-oriented act which persists in clarifying one's own position regardless of other's feelings/ideas.
   a. Direct Self-Justification: statements that persist on justifying one's own action.
   b. Justifying Third Party: statements that justify the action of a third party.
   c. Justifying Situation: statements that justify the righteousness of the situation.

12. Disagreement: individual-oriented act which undermines the partner's feelings or ideas.
   a. Dissent: short staccato responses such as "no, no" or "ah, ah."
   b. Direct Disagreement: explicit dissenting statement from the partner's viewpoint.
   c. Noncompliance: statements that refuse a preceding request.

ASSESSING RELIABILITY AND VALIDITY OF THE INCS

Different labels such as "agreement," "accuracy," "consistency," and "stability," have been associated with the term reliability. Indeed, the issue surrounding reliability, especially in interaction research, are multiple. For example, the conceptual definition of reliability varies from one researcher to the next. The choice of a statistical index of agreement also varies from author to author. Cronbach et al.'s (1972) monograph has perhaps the most comprehensive discussion on the issue of reliability in behavioral measurements. According to these methodologists, researchers who develop an instrument for a specific purpose should pick a reliability assessment that is most pertinent and relevant to the overall design of the instrument.

Hollenbeck (1978) in defining reliability in observational research argued convincingly that: (1) accuracy and stability are the necessary conditions of reliability; and (2) reliability can only be established through an analysis of measurement error. For the purpose of this investigation, reliability of the INCS instrument is assessed through two procedures. The first procedure concern intercoder reliability. Intercoder reliability refers to the degree of accuracy or consistency across observers in classifying each utterance in an interaction according to the coding instrument after observing the same phenomenon. If observational consistency across trained observers can be established , this will provide one piece of evidence concerning the "stable nature" of the new measurement. In addition to the intercoder reliability, the second procedure in assessing the reliability of INCS is concerned with the stability of the coding system across time dimension. The same coders are asked to recode ten percent of the previously coded interaction after the lapse of three weeks. In terms of the choice of reliability estimate, the reliability coefficient is computed through Cohen's (1968) Kappa statistic. Kappa is defined simply

as the proportion of agreement after chance agreement is removed from consideratic Cohen's Kappa is used because it is appropriate for assessing nominal scale agreement. It shows all entries where agreement occurs and all entries where disagreement occurs. Thus differences in agreement and disagreement between coders on a specific category are easy to identify and are valuable, especially when training interaction coders. Hartman (1974) suggested that "Kappa was the statistic agreement of choice because it is flexible, has desirable statistical properties, and is a superior approach in handling chance agreement."

While the two procedures identified above address the stability condition of the new coding instrument, the question of precision of the new system is approached as a validity issue. According to Folger (1979), an adequate response to the question of validity of an interaction coding instrument entails two questions: (1) do the message categories adequately represent the theoretical construct chosen for the study? and (2) on what evidence will a researcher rely to claim that the coding categories occur in the conversation? Answering the first validity question requires that the face and construct validity of the scheme be established. Responding to the second question requires that th researcher explicates his/her theoretical stance of coding operations--experienced, experiencing, or experiencer mode.

An interaction coding system possesses face validity when it appears to the investigator and the knowledgeable observers that the coding scheme embodies the assumptions of the investigator's theoretical framework, and that the categories are logically consistent with one another and are well defined (Poole & Folger, 1979). In essence, the literature review and the conceptual development of a newly-developed coding measurement should be viewed as providing supportive evidence to the face validity of a new instrument.

Construct validity is involved whenever no universe of content is accepted

by the researcher as entirely adequate to validly define the particular quality to be measured at that given time. Construct validity is, hence, concerned with how one seeks to "defend a proposed interpretation of a test" (Cronbach & Meehl, 1955). As Kaplan (1964) stated: "The validity of a measurement is what it is abl to accomplish, in what we are able to do with it . . . .The basic question is always whether the measures have been so arrived at that they can serve effectively as a means to the given end"(p.198). In brief, construct validity is identified by the particular orientation of the investigator and is concerned with whether the measurement scheme empirically relates to other variables in a meaningful direction. Construct validity of the INCS is demonstrated in this study through relating the INCS coded behaviors with a conceptually-relevant external variable, marital satisfaction.

The conceptual rationale for relating INCS communicative acts with the variable marital satisfaction is based on the following arguments: (1)communication has been identified as the key determinant of marital satisfaction in many previous studies (Fitzpatrick & Best, 1979; Jorgensen & Gaudy, 1980; Montgomery, 1981; Rausch et al., 1974; Royce & Weiss, 1975; Snyder, 1979); (2) the communicative acts that constitute the INCS have been based on the conceptual assumptions that mutual-oriented messages are integrative in managing relational disagreements, while individual-oriented messages are integrative in handling interpersonal differences; thus, (3) intimate couples who reported higher marital satisfaction are likely to use proportionally more integrative acts and fewer disintegrative acts than couples who reported low marital satisfaction; and, to the contrary, (4) intimate couples who reported low marital satisfaction should use proportionally more disintegrative acts and fewer integrative acts than couples who reported high marital satisfacti finally, (5) the INCS descriptive acts which attempt to facilitate information

exchange in the communication system should relate positively with the INCS integrative acts and relate negatively with the INCS coded disintegrative acts. Thus, if the three hypotheses concerning the relationships between the INCS coded behaviors are confirmed, the results will provide support for construct validity of the newly-developed coding instrument.

As for the second validity question raised by Folger (1979), this investigati has employed the experienced mode of observation in deriving the INCS coding categories. The experienced mode of observation studies the interaction from the viewpoint of an external observer. The primary criteria for evidence in this mode are: face validity and construct validity. Validation in the experienced perspective then is concerned with "an accurate correspondence between the coding categories and the theoretical domain specified by the researcher" (Poole & Folger, 1979). In summary, the question of validity of the Intimate Negotiation Coding System will be adequately addressed when evidence of face validity and construct validity is demonstrated.

METHOD

Subjects

Subjects were recruited through three sources: University family housing units, a local church group, and speech communication undergraduate classes. The two criteria for the recruitment of volunteer subjects were: (a) both spouses were within the age range of 18 to 38, and (b) they did not have any children. Both criteria were selected to control for possible confounding effects due to the variable of age or children. Altogether 34 marital couples participated in the study. The mean age of the sample was 27 years old (SD=1.20). The average dating time was 2-1/2 years; and the mean duration of the 34 marriages was 3 years 3 months.

Procedures

Spanier's Dyadic Adjustment Scale (DAS) was administered to every subject who participated in the study. The scale had been assessed in previous research (Spanier 1976; Spanier & Cole, 1976) for strong content, criterion-related, and construct validity. Reliability had been established at 0.96. Therefore, the DAS instrument was particularly functional in assessing construct validity of the newly-developed INCS measurement. The 32-item questionnaire was designed to measure relational adjustment and satisfaction in intimate couples in terms of four communication components: degree of consensus, cohesion, affectional expres and harmony in the relationship.

After filling out the DAS questionnaire, each married couple was instructe to discuss two marital topics in a videotaped session that lasted 30 minutes. The first conflict topic was based on the expressed perceptual disagreements of the couple's own response on the Dyadic Adjustment Scale. For example, one s might indicate on the DAS item of "handling family finances" that they "almost always disagree," while the other spouse indicated "always agree." The spouses then had a perceptual dissensus situation concerning a same item and verbal negotiation was needed to manage the perceived differences. The second interact task was based on Gottman's (1979) "improvised" marital conflict scenes. These scenes were: sharing events of the day, money, in-laws, sex, and decision to have children. The marital couple was instructed to select one out of the five conflict scenes (the one scene that they could most identify with) and engaged in a discussion of 15 minutes on how their own marital situation resembles the conflict scene as written on the index card. To counterbalance for any topical effect, half of all married couples were first administered the "improvised" task, then the DAS task; while the rest of the couples discussed first the DAS task, then the improvised task.

RESULTS

INCS Intercoder Reliability

After the two INCS coders (two undergraduate students from the speech communication department) had been trained in a 24-hour interaction coding program they coded all 34 marital interactions. A total of 3,652 utterances were coded. An utterance was conceptually defined as the continuous flow of the verbal message by one member in the dyad to the point at which this same member terminates verbal output or is intercepted by his or her dyadic partner. The coders were instructed to follow the following three rules in coding: (a) adhere strictly to the conceptual and operational definitions that have been established for each INCS category; (b) use a receiver-centered approach in coding; and (c) approach each utterance as a wholistic unit and treat the entire utterance as one message packet.

Of the 3,652 INCS coded acts, 24% of the utterances were coded as INCS integrative acts; 58% were coded as INCS descriptive acts; and 17% were classified as INCS disintegrative acts. Twenty percent of the coded interactions were randomly checked for intercoder reliability. Cohen Kappa Statistic indicated that intercoder agreements were 0.86 to 0.95.

Across-Time Reliability

After the final coding of all 34 interactions, ten percent of the earlier tapes were recoded by the same coders. Results indicated that one coder was slightly more consistent in her coding behavior than the other coder. The two coders reliability was above 0.85, while the intracoder reliability ranged from 0.74 to 0.84. Thus, the INCS instrument was a fairly stable instrument across time.

Construct Validity

A satisfaction index was computed for each couple by summing and averaging their scores on the Dyadic Adjustment Scale. The mean of the sample on the

DAS was 114.03. The marital satisfaction indexes for the 34 couples ranged from 64 to 137.

The statistical model of correlation analysis was used to determine the strength of the relationship between marital satisfaction and the INCS interactio related behaviors, and the direction of the relationship between the two conceptually-related variables. In order to compensate for the varying lengths of each interaction, the observed frequencies of the three classes of INCS behavi were summed and converted into overall proportions of integrative, descriptive, and disintegrative behavior. The mean proportion of integrative behavior for all 34 couples was 23.8 (SD=8.72). The average proportion of INCS disintegrative behavior was 16.7 (SD= 17.07). The mean proportion of descriptive behavior was 60.15 (SD= 12.83). A 0.05 level of significance was established for all statisti tests.

Inter-correlations of the three classes of behaviors indicated that integra bahavior was negatively related to disintegrative behavior ($r = -0.66$; $p<0.001$). INCS integrative behavior was positively related to the INCS descriptive behavio ($r = 0.28$; $p<0.05$); while INCS disintegrative behavior was strongly related to the INCS descriptive behavior in the negative direction ($r = -0.90$; $p<0.001$). The Pearson product-moment correlation coefficients were statistically significa for all three correlations. The moderate inverse correlation between integrativ behavior and disintegrative behavior showed that these two classes of INCS communicative acts were negatively related. The strong negative association between INCS disintegrative acts and INCS descriptive acts indicated that the INCS disintegrative acts functioned very differently than the INCS descripti acts as measured by the newly-developed coding instrument.

In testing the relationship of marital satisfaction with the three INCS interaction behaviors, marital satisfaction was found to be positively related

to the INCS integrative behavior ($r = 0.40$; $p<0.01$), while negatively related to the INCS disintegrative behavior ($r = -0.41$; $p<0.01$). Marital satisfaction was also positively related to the INCS descriptive behavior ($r = 0.33$; $p<0.05$).

Having established the magnitue and the direction of the relationship between marital satisfaction and the INCS three classes of behaviors, the model of multiple regression was used to describe the linear relationship between marital satisfaction and intimate interaction. Results of the multiple regression analysis on integrative behavior showed that 16 percent ($r^2 = 0.16$; $F = 6.09$; $p<0.01$) of the variance in INCS integrative behavior was explained by linear regression with the satisfaction variable. Further regression analysis on satisfaction and disintegrative behavior indicated that 17 percent ($r^2 = 0.17$; $F = 6.63$; $p<0.01$) of the variance in disintegrative behavior was accounted for by the predictor variable of marital satisfaction. A final analysis of the dependent relationship between satisfaction and INCS descriptive behavior showed that 11 percent ($r^2 = 0.11$; $F = 3.88$; $p<0.05$) of the variance in descriptive behavior was explained by the regression analysis. The findings of all three regression analyses were statistically significant at the 0.05 level.

In summary, results from both Pearson product-moment correlations and regression analyses suggest that there are systematic differences in interaction behaviors as coded according to the newly developed INCS instrument and systematic relationships also exist between the three classes of INCS behaviors to variation in marital satisfaction levels.

DISCUSSION

The results of this study supported the three hypotheses pertained to the construct validity of the newly-devised Intimate Negotiation Coding System in coding intimate conversation. Specifically, Pearson correlation analyses among the three classes of INCS coded acts indicated that couples who engage in

integrative verbal acts and descriptive verbal acts used significantly fewer disintegrative verbal acts; couples who engage in disintegrative verbal acts used significantly fewer integrative verbal acts and descriptive verbal acts. The strong inverse correlation between the INCS disintegrative behavior and the INCS descriptive behavior showed the strength of the directional differences between the two classes of INCS behaviors. Thus, within the INCS instrument, discriminant validity exists between the INCS integrative and descriptive behavior on one side, and the INCS disintegrative coded behavior on the other.

In relating the INCS coded behaviors with the external variable, marital satisfaction, couples who communicated more integrative and descriptive verbal acts reported a higher degree of marital satisfaction. Couples who exhibited more disintegrative verbal acts reported a lower degree of marital satisfaction. The hypotheses advanced earlier in the study--that a positive association exists between the degree of marital satisfaction and the INCS integrative acts, and tha a negative association exists between the degree of satisfaction and the INCS disintegrative communicative acts--were confirmed. In addition, the INCS descriptive acts have also been found to function positively in the context of marital interaction.

The multiple regression analyses provided additional insight to the correlati analyses. It was found that significant dependent relationships do exist between satisfaction and the three classes of INCS coded verbal behaviors. Marital satisfaction shared 16 percent of the variance in INCS integrative behavior. Similarly, it shared 17 percent of the variance in INCS disintegrative behavior. It also explained 11 percent of the variance in INCS descriptive behavior. Given the fact that most marital studies which attempt to relate a combination of variables to marital satisfaction have accounted for 30 percent of the varianc in conjugal satisfaction (Gottman, 1979), the results from the regression analyse

in this study are substantial because of the fact that the sample size (N =34 coup for the purpose of regression method is relatively small.

Although the INCS has received considerable support in this investigation as a reliable and valid coding instrument in the setting of marital interaction, some modifications are still needed to improve the INCS as a functional instrument One limitation of the INCS is that a major portion (58 percent) of interaction utterances of married couples fell into the descriptive coding categories. Perhap future studies using the INCS instrument should further divide the descriptive categories into an "active description/questioning" dimension versus a "passive avoidance" dimension, and hence enable future researchers to more precisely interpret implications of the INCS descriptive communicative acts. A second limitation of the INCS is concerned with the INCS "compromise" category. According to a previous study (Royce & Weiss, 1975), compromising was found to be one of the most important indicators that discriminated a happy marriage from an unhappy one. In this study, however, there is a relatively low percentage (2.2 percent) of compromising acts. One explanation for this low percentage can be that there were differences in experimental tasks in the two studies. While previous marital studies often required the couples to come to a common solution or consensus of a task-oriented problem (e.g. NASA moon problem), this study focused primarily on the open-ended discussion of the spouses. The investigator did not ask the participants to arrive at a consensus solution to their marital problem. Thus, this could be the reason why the INCS compromising category did not function as meaningfully as compared to prior research. A final limitation of the study is concerned with the relationships between the INCS coded behaviors and the marital sample. Since only 34 marital couples (without children) particip in this study, interpretation of results can only be generalized to the interactio process of married couples without children. In future studies a large and more

diverse sample size of married couples can be used to compare with the findings in this investigation. Three further recommendations for future research are outlined below.

A first recommendation for future research is to continue the work on reliability and validity of the newly-developed Intimate Negotiation Coding System. For example, future studies can assess cross-comparison reliability of the INCS by utilizing different sets of coders to observe and code the same phenomenon. Additional other forms of validity can also be addressed in future investigations. For example, representational validity (Poole & Folger, 1979) can be researched by having marital couples review portions of the videotaped interaction, then label their own utterances according to the operational definitions set forth for each INCS coding category. Expert judges such as marital counselors or therapists can also be used to judge part of the videotape interactions to assess the external validity of the INCS coded categories. External validity can also be further established by relating the INCS measureme with other conceptually-related coding schemes.

A second research direction concerns additional testing of the INCS instrum The coding system should be tested in a variety of research settings (for exampl home versus experimental settings) by different researchers at different points of intimate relational development (for example, dating stage to marriage to marital stage with first-born child). The coding scheme can also be tested in different types of interaction tasks and different intimate population groups. Such multivariate approaches would contribute to a fuller understanding of how reliably and validly the INCS works in multidimensional intimate settings

Finally, there remains the need for better conceptualized studies to relate the INCS intimate negotiation behaviors with other theoretically-relevant intimacy variables. This investigation contributes to a general understanding

of how INCS communicative behaviors function in the marital setting. More conceptual and substantive research is needed to interrelate the different findings of how intimate couples engage themselves in intimate conversations. A functional framework of conversation between intimates should lead to a set of parsimonious explanations of how communication contributes to the escalation and de-escalation of a fulfilling and enriching intimate relationship

REFERENCES

Birchler, G.R., Weiss, R.L., & Vincent, J.P. A multimethod analysis of social reinforcement exchange between maritally distressed and nondistressed spouse and stranger dyads. Journal of Personality and Social Psychology, 1975, 31, 349-360.

Cissna, K.L., & Keating, S. Speech Communication antecedents of perceived confirmation. Western Journal of Speech Communication, 1979, 43, 48-60.

Cohen, J. Weighted Kappa: Nominal scale agreement with provision for scaled disagreement or partial credit. Psychological Bulletin, 1968, 70, 213-220.

Courtright, J.A., Millar, F.E., & Rogers-Millar, L.E. Domineeringness and dominance: Replication and expansion. Communication Monographs, 1979, 46, 179-192.

Cronbach, L.J., Gleser, G.C., Nanda, H., & Rajaratnam, M. The Dependability of Behavioral Measurement: Theory of Generalizability for Scores and Profiles. New York: John Wiley and Sons, Inc., 1972.

Cronbach, L.J., & Meehl, P. Construct validity of psychological tests. Psychological Bulletin, 1955, 52, 281-302.

Cupach, W.R. Interpersonal Conflict: Relational Strategies and Intimacy. Paper presented at the Speech Communication Association, New York, September 1980.

Dance, F.E., & Larson, C.E. Speech Communication: Concepts and Behavior. New York: Holt, Rinehart, and Winston, Inc., 1972.

Duncan, H.D. The search for a social theory of communication in American sociology. In F.E. Dance (Ed.), Human Communication Theory. New York: Holt, Rinehart, and Winston, Inc., 1967.

Ericson, P. Relational Communication: Complementarity and Symmetry and their Relation to Dominance-Submission. Unpublished Ph.D. dissertation, Michigan State University, 1972.

Ericson, P., & Rogers, E. New procedures for analyzing relational communication. Family Process, 1973, 12, 245-267.

Falbo, T., & Peplau, L.A. Power strategies in intimate relationships. Journal of Personality and Sociai Psychology, 1980, 38, 618-628.

Fitzpatrick, M.A., & Best, P. Dyadic adjustment in relational types: Consensus, cohesion, affectional expression and satisfaction in enduring relationship. Communication Monographs, 1979, 46, 167-178.

Fitzpatrick, M.A., & Winke, J. You always hurt the one you love: Strategies and tactics in interpersonal conflict. Communication Quarterly, 1979, 27, 3-11.

Folger, J. Notes on the validity of interaction analysis schemes. Paper present at the International Communication Association, Philadelphia, May 1979.

Gergen, K. The Psychology of Behavior Exchange. Reading, Mass.: Addison-Wesley, 1969.

Gottman, J.M. Marital Interaction: Experimental Investigation. New York: Academic Press, 1979.

Gottman, J.M., Notarius, C., & Markman, H. Couples Interaction Scoring System. Champagne, ILL.: Department of Psychology, University of Illinois, 1976.

Hartman, D.P. Assessing the quality of observational data. Symposium paper presented at Western Psychological Association, San Francisco, 1974.

Hawkins, J.L., Weisberg, C., & Ray, R.E. Spouse differences in communication style: Preference, perception, and behavior. Journal of Marriage and the Family, 1980, 42, 585-593.

Haynes, S.N., Follingstad, D.R., & Sullivan, J.C. Assessment of marital satisfaction and interaction. Journal of Consulting and Clinical Psychology, 1979, 47, 789-791.

Hollenbeck, A.R. Problems of reliability in observation research. In G.P. Sackett (Ed.), Observing Behavior: Data Collection and Analysis Methods. Baltimore: University Park Press, 1978.

Hops, H., Wills, T.A., Patterson, G.R., & Weiss, R.L. Marital Interaction Coding System. Unpublished manuscript, University of Oregon and Oregon Research Institute, 1972.

Jacobsen, N.S., & Martin, B. Behavioral marriage therapy: Current status. Psychological Bulletin, 1976. 83. 540-556.

Jorgensen, S.R., & Gaudy, J.C. Self-disclosure and satisfaction in marriages: The relation examined. Family Relations, 1980, 29 281-297.

Kaplan, A. The Conduct of Inquiry: Methodology for Behavioral Science. San Francisco: Chandler, 1964.

Kelley, H.H., & Thibaut, J. Interpersonal Relations: A Theory of Interdependen New York: Wiley, 1978.

Knapp, M.L., Ellis, D.G., & Williams, B.A. Perceptions of communication behavio associated with relationship terms. Communication Monographs, 1980, 47, 262-294.

Marwell, G., & Schmitt, D.R. Dimensions of compliance-gaining behavior: An empirical analysis. Sociometry, 1967, 30, 350-364.

McLaughlin, M.L., Cody, M.J., Robey, C.S. Situational influences on the selecti of strategies to resist compliance-gaining attempts. Human Communication Research, 1980, 7, 14-36.

Miller, G., Boster, F., Roloff, M., & Seibold, D. Compliance-gaining message strategies: A typology and some findings concerning effects of situational differences. Communication Monographs, 1977, 44, 35-51.

Montgomery, B.M. The form and function of quality communication in marriage. Family Relations, 1981, 30, 21-30.

Olson, D.H., & Ryder, R.G. Inventory of marital conflicts (IMC): An experimenta interaction procedures. Journal of Marriage and the Family, 1970, 32, 443-448.

Parks, M. Relational communication: Theory and Research. Human Communication Research, 1977, 3, 372-381.

Parks, M., & Dindia-Webb, K. Recent developments in relational communication research. Paper presented at the International Communication Association, Philadelphia, May 1979.

Parks, M., Farace, R., Rogers, E., Albrecht, T., & Abbott, R. Markov process analysis of relational communication in marital dyads. Paper presented at the Speech Communication Association, Houston, December 1975.

Patterson, G.R., Hops, H., & Weiss, R.L. Interpersonal skills training for couples in early stages of conflict. Journal of Marriage and the Family, 1975, 37, 295-302.

Poole, M.S., & Folger, J. A method for establishing the representational validi of interaction coding schemes, opus 1: Do we see what they see? Paper presented at the Speech Communication Association, Minneapolis, November 19

Rausch, P.A., Barry, W., Hertel, R., & Swain, M. Communication, Conflict, and Marriages. San Francisco: Josse-Bass, 1974.

Resick, P.A., Welsh, B.K., & Zitomer, E.A. Revising the marital interaction coding system: Extension and cross validation. Paper presented at the American Psychology Association, New York, September 1979.

Resick, P.A., Welsh, B.K., & Zitomer, E.A., et al. Predictors of marital satisfaction, conflict and accord: A preliminary revision of the marital interaction coding system. Paper presented at the Association for the Advancement of Behavior Therapy, Chicago, November 1978.

Rogers, L.E., & Farace, R.V. Analysis of relational communication in dyads: New measurement procedures. Human Communication Research, 1973, 1, 222-239.

Roloff, M.E. Communication strategies, relationships and relational change. In G.R. Miller (Ed.), Explorations in Interpersonal Communication. Beverly Hills, Cal.: Sage Publications, 1976.

Royce, W.S., & Weiss, R.L. Behavioral Cues in the Judgment of marital satisfaction: A linear regression analysis. Journal of Consulting and Clinical Psychology, 1975, 43, 816-824.

Sieburg, E., & Larson, C. E. Dimensions of interpersonal response. Paper presented at the International Communication Association, Phoenix, May 1971.

Sillars, A.L. Attributions and communication in roommate conflicts. Communication Monographs, 1980a, 47, 180-200.

Sillars, A.L. The stranger and the spouse as target persons for compliance-gaining strategies: A subjective expected utility model. Human Communication Research, 1980b, 6, 265-279.

Sillars, A.L. The sequential and distributional structure of conflict interacti as a function of attributions concerning the locus of responsibility and stability of conflicts. In D. Nimmo (Ed.), Communication Yearbook IV. New Brunswick, N.J.: Transaction Books, 1980c.

Snyder, D.K. Multi-dimensional assessment of marital satisfaction. Journal of Marriage and the Family, 1979, 41, 813-823.

Spanier, G.B. Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. Journal of Marriage and the Family, 1979, 41, 813-823.

Spanier, G.B., & Cole, C.L. Toward clarification and investigation of marital adjustment. International Journal of the Sociology of the Family, 1976, 6, 121-146.

Sprey, J. Conflict theory and the study of marriage and the family. In W.R. Bu R. Hill, F.I. Nye, & I.L. Reiss (Eds.), Contemporary Theories About the Family. New York: The Fress Press, 1979.

Thibaut, J.W., & Kelley, H.H. The Social Psychology of Groups. New York: Wile 1959.

Ting-Toomey, S. An Analysis of Marital Communication Behaviors and Perceptions of Marital Satisfaction: A Validation Study of the Intimate Negotiation Coding System. Unpublished Ph.D. dissertation, University of Washington, 1981.

Weiss, R.S. Marital Separation. New York: Basic Books, Inc., 1975.

Weiss, R.L., Hops, H., & Patterson, G.R. A framework for conceptualizing marital conflict: A technique for alterating it, some data for evaluating it. In L.A. Hamerlynck, L.C. Handy, & E.J. Mash (Eds.), Behavior Change: The Fourth Banff Conference on Behavior Modification. Champagne, Ill: Research Press, 1973.

Winter, W.D., Ferreira, A.J., & Bowers, N. Decision-making in married and unre couples. Family Process, 1973, 12, 83-94.